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# (12) United States Patent

#### Nakanishi et al.

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# (54) CELL CULTURE DEVICE, CELL CULTURE SYSTEM, AND CELL CULTURE METHOD

#### (71) Applicant: ARKRAY, Inc., Kyoto-shi (JP)

## (72) Inventors: Naoyuki Nakanishi, Kyoto (JP);

Yuichiro Noda, Kyoto (JP)

## (73) Assignee: ARKRAY, Inc., Kyoto-shi (JP)

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#### (58) Field of Classification Search

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See application file for complete search his	tory.

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Primary Examiner — Kevin Joyner Assistant Examiner — Holly Mull (74) Attorney, Agent, or Firm — Fox Rothschild LLP

### (57) ABSTRACT

To provide a cell culture device, a cell culture system and a cell culture method capable of suppressing fluctuations in pressure in a culture fluid, and suppressing gas bubbles from flowing into a cell culture section. A cell culture device including: a cell culture section that cultures cells; a storage section that stores a culture fluid; flow paths that connect the cell culture section and the storage section; a fluid delivery device that is provided at the flow paths and that delivers the culture fluid from the storage section to the cell culture section; a pressure equalizing unit that is provided at the flow paths and that suppresses fluctuations in pressure imparted to the culture fluid delivered to the cell culture section; and a pressurization unit that is provided at the flow path at a flow outlet side of the cell culture section and that applies a specific pressure to the culture fluid.

## 7 Claims, 13 Drawing Sheets

